



BRITISH HONDURAS

MEDICAL REPORT

For the year 1927

BY

W. E. BURTON

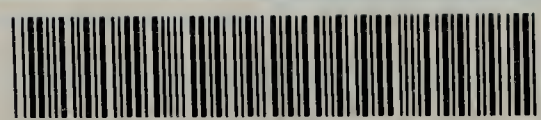
M.D., C.M. (McGill)

PRINCIPAL MEDICAL OFFICER

BELIZE

Printed at the Government Printing Office

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BRITISH HONDURAS.

MEDICAL DEPARTMENT,

Belize, 25th July, 1928.

SIR,

I HAVE the honour to submit, for the information of His Excellency the Governor and for transmission to the Right Honourable the Secretary of State, the Medical Report on the health and sanitary condition of the Colony of British Honduras for the year 1927 together with the Returns, &c., appended thereto.

I have the honour to be,

SIR,

Your obedient servant,

W. E. BURTON,

Principal Medical Officer.

The Honourable

The Colonial Secretary.

BRITISH HONDURAS
ANNUAL MEDICAL AND SANITARY REPORT FOR THE
YEAR ENDING 31ST DECEMBER, 1927.

I. ADMINISTRATIVE.

Staff.

The Staff consists of a Principal Medical Officer and seven Assistant Medical Officers — two for Belize and one each for the Districts of Corozal, Orange Walk, Stann Creek, Toledo and Cayo—and

A European Nursing Staff, controlling a native Staff, consisting of —

(a) A Matron—Public Hospital, Belize, and

(b) A Nursing Sister—Public Hospital, Belize.

Tables 1—A, 1—B, and 1—C detail the Medical and Nursing Staff.

During the year under review The Honourable Dr. JAMES CRAN, Principal Medical Officer, was absent on vacation leave from 3rd to 25th November.

Dr. J. E. HOAR, Assistant Medical Officer, Orange Walk, was absent on leave from 20th June to 31st December.

Dr. F. L. DAVIS, Assistant Medical Officer, Belize, retired on pension on 27th March.

Dr. W. D. FORGRAVE, Assistant Medical Officer, Belize, was transferred to Orange Walk on 5th August and resigned on 25th December.

Dr. R. E. GORDON, Assistant Medical Officer, Belize, assumed duty on 28th March and resigned on 22nd April.

Dr. W. JOHNSON, Assistant Medical Officer, Belize, assumed duty on 1st August.

For nine months of the year the Medical Staff was short one officer.

Dr. S. K. SMITH was appointed Radiologist to the Public Hospital, Belize, on 1st December.

Miss L. M. ROBERTS, Matron, Public Hospital, Belize, was absent on vacation leave from 8th March to 29th May.

Mr. P. A. HYDE, Dispenser and Storekeeper, Public Hospital, Belize, was absent on vacation leave from 18th June to 17th September.

Ordinances affecting Public Health enacted during the Year.

No. 14 of 1927 — The Opticians Ordinance, 1927.

This Ordinance provides for the Registration of persons practising Optometry in the Colony.

No. 16 of 1927 — The Public Health Amendment Ordinance, 1927.

This Ordinance provides for increased storage of rain water on premises; tanks erected or re-erected on and after 1st January, 1928, shall be capable of storing not less than five gallons per square foot of inhabited floor.

No new regulations under existing Ordinances have been passed during the year.

Financial.

In this section the figures all refer to the financial year ending 31st March, 1928.

Medical Department.

<i>Receipts :</i>	..	Hospital and Asylum Fees	..	<u>\$7,416.75</u>
<i>Expenditure :</i>		Personal Emoluments	.. ..	\$46,924.21
	.	Other Charges	.. ..	<u>44,998.35</u>
		Total Expenditure	.. ..	<u>\$91,922.56</u>

The institutions in respect of which the Expenditure was incurred are as follows :—

<i>Institution</i>						<i>Average daily Number</i>
Belize Hospital	..	..	..	..	..	47.16
Poor House	..	..	..	..	..	47.03
Lunatic Asylum	..	..	..	..	..	48.53
District Hospitals—						
Corozal	..	..	..	..	..	9.00
Orange Walk	..	..	..	..	..	4.00
Stann Creek	..	..	..	..	..	13.00
Toledo	..	..	..	..	..	4.00
Cayo	..	..	..	..	..	6.00

The expenditure of the amount for Dieting is shown in the following Table :—

	<i>Total Amount</i>	<i>Average daily Number</i>	<i>Cost per Head per Day in Cents</i>
Belize ..	\$22,349.82	142	43
Corozal ..	1,614.06	9	46
Orange Walk	1,034.12	4	70
Stann Creek	1,961.09	13	41
Toledo ..	652.49	4	45
Cayo ..	1,400.25	6	64

Belize includes Public Hospital, Poor House, and Lunatic Asylum.

Central Board of Health.

<i>Receipts :</i>	..	..	..	..	..	..	..	NIL
<i>Expenditure :</i>	Personal Emoluments	..	..	..	..	..	..	\$12,605.00
	Other Charges	..	..	..	..	..	..	4,640.00
	Total Expenditure	..	..	..	..	..	..	<u>\$17,245.00</u>

The total expenditure for Medical and Sanitary services, in so far as the Central Board of Health is concerned with the latter service, was \$109,167.56 and this represents 10% of the Estimated General Revenue of the Colony.

II. PUBLIC HEALTH.

General Remarks.

No case of quarantinable disease occurred in the Colony during the year.

Whooping Cough was epidemic during the year ; and there were 13 deaths from this disease.

Influenza was also prevalent and one death is registered from this disease in the Belize District.

(1) GENERAL DISEASES.

General Diseases are not common.

Cancer was responsible for 20 deaths or 3.8% of the total certified deaths. In 1926 there were 17 deaths and in 1925, 12 deaths. The site of the disease was the Female Generative Organs in 6 cases only and the pharynx, oesophagus or liver in 7 cases. No deaths from this disease occurred in Orange Walk District.

Diabetes was responsible for 4 deaths — 3 of them being in Stann Creek District.

Pellagra apparently does not occur.

(2) COMMUNICABLE DISEASES.

(a) Mosquito or Insect-borne Diseases.

Malaria.—The deaths from this disease during the last four years are as follows :—

In 1924, 30 deaths or 6.3% of the total certified deaths.

In 1925, 29 deaths or 6.3% of the total certified deaths.

In 1926, 28 deaths or 5.5% of the total certified deaths.

In 1927, 36 deaths or 6.9% of the total certified deaths.

During the year, there were 188 deaths uncertified by a Medical Practitioner in which the cause of death is stated to be “Fever.”

A large number of these uncertified deaths are probably due to Malaria.

The number of cases of Malaria treated in the Public Hospitals of the Colony during the same period is shown in the following table :—

<i>Hospital</i>	1924		1925		1926		1927	
	<i>Cases</i>	<i>Deaths</i>	<i>Cases</i>	<i>Deaths</i>	<i>Cases</i>	<i>Deaths</i>	<i>Cases</i>	<i>Deaths</i>
Belize ..	92	2	163	6	165	3	130	4
Corozal ..	20	1	62	1	43	0	35	2
Stann Creek..	54	1	69	1	96	4	74	1
Orange Walk	48	0	43	1	51	7	35	3
Cayo	50	3	34	0	30	3	23	0
Toledo ..	60	1	49	1	48	3	22	0
Total ..	324	8	420	10	433	20	319	10

Percentage of
Total Hospital

Cases 20.2 27.6 22.5 16.8

There has been no increase in the number of cases of Malaria treated in the Hospitals—on the contrary there has been a decrease. The types of the disease most frequently occurring are the Sub-Tertian or Aestivo Autumnal and the Tertian. There was only one case of Blackwater Fever. This was treated in Orange Walk Hospital and proved fatal.

Yellow Fever.—No case of this disease has occurred in the Colony since November 1924.

Filaria.—No cases of this disease appear in the Returns.

Enteric Group and Dysentery. —

Enteric Fever is comparatively rare in this Colony.

In 1924 there were 4 cases treated with 1 death.

In 1925 there were 8 cases treated with no deaths.

In 1926 there were 3 cases treated with 2 deaths.

In 1927 there was 1 case treated with no deaths.

Total for the 4 years — 16 cases with 3 deaths.

All the cases are reported from the Belize Hospital except one case which was reported from Stann Creek.

Dysentery on the other hand exists throughout the districts and there has been an increase in the number of cases treated in the various hospitals each year during the past 4 years.

In 1924 there were 72 cases treated with 11 deaths.

In 1925 there were 87 cases treated with 12 deaths.

In 1926 there were 96 cases treated with 10 deaths.

In 1927 there were 134 cases treated with 18 deaths.

There were 30 certified deaths from Dysentery in the Colony in 1927 as against 24 deaths in 1926.

To these certified deaths must be added a large number of the uncertified 84 deaths stated to have been due to “Diarrhoea, Dysentery and Badbowels.”

Both the Amoebic and the Bacillary types occur. The disease is most prevalent during the rainy season.

(b) *Infectious Diseases.*

Tuberculosis.—Certified deaths from this disease during the past four years are as follows :—

In 1924 39 certified deaths or 8.1% of total.

In 1925 55 certified deaths or 11.9% of total.

In 1926 49 certified deaths or 9.6% of total.

In 1927 48 certified deaths or 9.2% of total.

There were during the year under review 14 uncertified deaths, in which the cause of death was stated to be “Consumption, Cough or Cold.”

There were 83 cases treated in the various hospitals of the Colony in 1927 as against 66 cases in 1926.

Pulmonary Tuberculosis is a notifiable disease in this Colony and 13 cases were notified by private medical practitioners in 1927. The number of cases of this disease is steadily increasing, the pulmonary form of the disease being most common.

Venereal Diseases are extremely prevalent in all the Districts of the Colony. It is difficult to get the natives to take treatment early enough and to continue it.

Tetanus.—There were 6 deaths from this disease in 1927 as compared with 1 in 1926.

Leprosy.—There are apparently no cases of Leprosy in the Colony. The Leper Home has been closed since May, 1924.

Small Pox.—No case of this disease is reported.

The following Table gives the number of primary successful vaccinations performed during the year :—

<i>District</i>	<i>First Quarter</i>	<i>Second Quarter</i>	<i>Third Quarter</i>	<i>Fourth Quarter</i>	<i>Total</i>
Belize ..	149	116	61	45	371
Corozal ..	28	35	11	32	106
Orange Walk	137	16	59	55	267
Stann Creek	38	20	66	58	182
Toledo ..	125	17	14	19	175
Cayo ..	2	15	5	42	64
Total ..	..	..	..	..	1,165

In 1926 there were 774 vaccinations performed and in 1925, 706.

Rabies.—There has been no case of Rabies since November, 1926.

Leishmaniasis.—12 cases of cutaneous Leishmaniasis were treated in the Hospitals during the year. There were no deaths.

(c) *Helminthic Diseases.*

Ankylostomiasis is extremely prevalent in the country districts of the Colony.

Morbidity.

The following table shows the number of deaths from all causes occurring in the various districts during the four quarters of the year :—

<i>District</i>	<i>First Quarter</i>	<i>Second Quarter</i>	<i>Third Quarter</i>	<i>Fourth Quarter</i>	<i>Total</i>
Belize ..	110	85	78	119	392
Corozal ..	43	24	37	50	154
Orange Walk	37	37	46	36	156
Stann Creek	54	30	21	22	127
Toledo ..	46	37	38	36	157
Cayo ..	27	23	49	44	143
Total	317	236	269	307	1,129

In 1927 there were 1,129 deaths, of which only 518 or 45.8% were certified by a Registered Medical Practitioner.

In 1926 there were 1,173 deaths of which only 43.1% were certified.

Epidemic, Endemic and Infectious Diseases were responsible for 26.8% of the certified deaths as follows :—

Tuberculosis	9.2%
Malaria	6.9%
Dysentery	5.7%
Other Infectious Diseases	5.0%

Vital Statistics.

The population of the Colony at the end of the year was estimated to be 49,249 as detailed in Table 3.

In all the districts the Births considerably exceed the Deaths ; and there is an increase in population in each district.

The Birth Rate for the Colony is 36.4 per thousand as against 38.3 in 1926.

The Death Rate for the Colony is 21.1 per thousand as against 24.1 in 1926.

The Birth Rate is highest in Toledo and lowest in Belize.

There has been a decrease in the Death Rate for 1927 as compared with 1926 in all the districts except Stann Creek. The Death Rate is highest in Toledo and lowest in Belize.

Registration of Births and Deaths is compulsory under Section 39 of Chapter 216 of the Consolidated Laws and is believed to be reliable. Still Births are not registered.

Infantile Mortality, considered as the number of deaths under one year of age to every thousand of living births, is shown in Table 4 and compared with the two previous years.

The Infantile Mortality Rate for the Colony in 1927 was 137 as compared with 141 in 1926, and 112 in 1925.

The Infantile Mortality Rate varies considerably for the districts. In 1927 it is lowest in Cayo and highest in Orange Walk.

There is a considerable increase in the Infantile Mortality Rate in Belize, Stann Creek and Orange Walk Districts. The other Districts show a reduced Infantile Mortality Rate.

Tables showing the Sick, Invaliding and Death Rates of European or Native Officials are not inserted, as Government Officials are attended by Private Medical Practitioners.

Appended are the Reports of the Assistant Medical Officers for the various Districts of the Colony.

III. SANITATION.

Administrative.

There is a Central Board of Health for the entire Colony consisting of seven members. The Principal Medical Officer is Chairman of this Board and Medical Officer of Health for the Colony.

The Colony is divided into six districts, each with a Local Authority. The Local Authority for the Belize District is the Town Board of Belize.

In each of the Districts the Assistant Medical Officer is the District Medical Officer of Health.

Table 2 details the Sanitary Staff controlled by the Central Board of Health.

Preventive Measures.

Yellow Fever.—The absence of any pipe-borne water supply in the Colony necessitates considerable storage of rain water in tanks, vats, barrels and other receptacles, with consequent *Stegomyia* breeding. The Sanitary Staff have been engaged in frequent inspections in order to detect the presence or absence of Mosquito Larvae in these receptacles.

The *Stegomyia* House Index for 1927 works out at 1.25% for Belize, which is well within the limits of safety.

These *Stegomyia* surveys have not been made as frequently as they should in Belize on account of the fact that the Sanitary Inspectors have been engaged in supervising the work of crab destruction. While the figures may be said to be satisfactory, they are capable of considerable reduction.

Arrivals in the Colony from Guatemala, Mexico and Spanish Honduras are all subjected to Medical Surveillance on landing ; but owing to the length of our coast line and boundaries it is safe to assume that evasions frequently occur, and therein lies a grave source of danger, necessitating the reduction of the *Stegomyia* Index to a vanishing point.

Screening of water receptacles is not universally practised as a Preventive Measure : While it is the most effective, it is the most expensive. The use of larvivorous fish is by far the most commonly used Anti-*stegomyia* preventive measure ; it is both cheap and effective. Oiling is an effective measure which is also frequently used.

Crab Destruction.—The destruction of crabs by means of Cyanogas was continued during the year. The results have been satisfactory. Crabs are considerably decreased in number and so are also crabholes, sheltering places of mosquitoes and sandflies. It is necessary that this work of destruction should be carried on with increased rather than diminished vigour if the results so far obtained are to be permanent. It is also necessary that this work of crab destruction should not be carried out at the expense of other more important work — thorough and frequent inspection of premises for the presence or absence of mosquito larvae.

Malaria.—Preventive Measures are most inadequate. All that is being done at present is the oiling of pools of stagnant water within the Towns; the large swamps in the immediate neighbourhood remain undrained and untreated.

The use of Quinine prophylactically is not popular.

Dysentery.—Measures to prevent access of dust and flies to food are not enforced.

While house flies are not as plentiful in this Colony as in other tropical countries, there are still enough of them to be dangerous. Crows are however numerous.

There are no Regulations with regard to storing of manure within Town limits.

Faulty methods of disposal of excreta are also responsible for the presence of this disease which is steadily increasing in all the districts.

Tuberculosis.—When a person who has been notified to be suffering from this disease dies, the room is disinfected by the Sanitary Inspector.

There is also a building in the neighbourhood of the Belize Hospital with seven beds reserved for cases of Tuberculosis. It is only used by those who are absolutely destitute and dying. Beyond this no preventive measures may be said to be taken. There is no place where early cases can be treated away from their families — thus preventing the spread of the disease. Tuberculosis is on the increase in the Colony and will continue to increase until means are found to provide free treatment for all early cases in isolation. It will be necessary also to do further filling in of lots — very many of the houses are built on sites which are very little more than swamps. Measures to prevent the access of dust, dirt and flies to food-stuffs should be enforced. Spitting on the streets and in public places should be prohibited under penalty of a very heavy fine.

General Measures.

SEWAGE DISPOSAL.

(a) *The Town of Belize.*—The majority of householders in Belize empty their utensils into the River, the Canals running through the town, or into the sea. The canals, unfortunately, have little or no current and their outlet is often blocked by the inflow from the sea. The canals are therefore usually offensive and a menace to health.

Individual septic tanks are becoming popular among the better class residents but there are too many houses where, owing to lack of funds or of space, water closets are an impossibility. This being so, the emptying of utensils into the canals while it may be unsightly is far more sanitary than storage in pails or pits within the house or in close proximity to other houses.

The Public Latrines are all built over the sea or river or canals and they are maintained in a sanitary condition by the Town Board. There is however no separate accommodation for women and it would appear not to be necessary in this Colony. Additional Public Latrines may be desirable in situations other than the banks of the river, the canals and the sea but in the absence of any automatic water flush, it would be impossible to maintain them in a sanitary condition owing to the difficulty of getting any one to remove their contents. For this reason it is impossible to provide more extended latrine accommodation in Schools — for those at present in existence are not emptied as regularly as they should be.

(b) *In other parts of the Colony.*—In Stann Creek Town conditions resemble those prevailing in Belize. In other districts, pit latrines are in use.

REMOVAL AND DISPOSAL OF REFUSE.

The Scavenging of the town of Belize and other towns in the Colony is performed under the direction of the Local Authority. On the whole it is well done.

In Belize there is far too much paper and light rubbish scattered on the streets. The receptacles used by householders should be covered and a sufficient number of sanitary, covered, galvanized iron dustbins provided to deal with the light rubbish.

The town rubbish is utilised in Belize for making the foundation of new roads.

WATER SUPPLY.

(a) *Belize.*—Rain water stored in vats, tanks and other receptacles on premises of householders is the only source of drinking water.

There are many wells but these are not used for the supply of water for drinking purposes.

The Town Board has a supply of rainwater stored in vats and sold to the general public.

The supply is inadequate. In spite of recent legislation increasing the storage capacity, the poorer classes suffer from shortage of water during the dry seasons.

(b) *In the out-districts* the water supply is similar to Belize. In Stann Creek, river water is also used. As all the excreta from the town is deposited in the river, this cannot be considered a proper source of supply.

DRAINAGE.

In Belize.—There are a few drains in the town but none of them act effectually owing to the absence of any fall to the sea. In high tides there is actually an inflow from the sea, river and canals to the adjoining streets and house lots.

In the rainy season oil has to be continually applied to such water as does not soak through the soil. In other parts of the Colony conditions are on the whole better than in Belize because there is a natural fall.

FILLING IN OF LOTS.

Belize.—Lots on which houses are already built are being continually filled in to render them less swampy. In this town it may be truly said that not only are houses built but also the land on which the houses are erected. By the individual action of householders much has already been done to render the town more healthy but a great deal still remains to be done in the way of filling in before the majority of lots on which houses have been erected can be classed as sanitary. In the absence of any organised scheme for surface drainage all that is being done is to continue shifting water from one lot on to the next.

In *Stann Creek*, conditions are worse than Belize ; in other districts very much better.

CLEARING OF BUSH.

The house lots are kept comparatively free from bush ; but the mangrove bush in swamps adjoining the town should be regularly kept down.

In *Stann Creek*, not only are house lots overgrown with bush but the roads leading to them. There is need for considerable cutting down of bush and undergrowth.

SLAUGHTER HOUSE AND MARKET.

These are controlled by the Town Board. Visits of inspection are made frequently by the Chief Sanitary Inspector.

Measures taken to spread Knowledge of Hygiene and Sanitation.

Elementary Hygiene is taught in the schools. Dr. F. L. Davis, late Assistant Medical Officer, Corozal, has written an Elementary Book on Hygiene which is in use in the schools.

Recommendations for future Work.

- (i) Installation of pumps capable of emptying the North and South Side Canals at frequent intervals and whenever necessary.
- (ii) Surface drainage for a part, if not the whole, of the Town of Belize.
- (iii) Provision for the treatment in isolation of early cases of tuberculosis.
- (iv) Increased storage of rain water or installation of a pipe-borne system of water supply.

IV. PORT HEALTH WORK AND ADMINISTRATION.

Quarantine restrictions in respect of Small Pox and Yellow Fever have been in force against the following places :—

Jamaica (for Alastrim only),
 The Republic of Honduras,
 The Republic of Guatemala,
 The Republic of Mexico,
 The Republic of Brazil.

No cases of quarantinable disease occurred during the year.

The crew and passengers of all vessels arriving from infected places are allowed to land subject to medical supervision, and 7,431 persons have so presented themselves for medical examination during the year.

V. Summary of Meteorological Observations taken at Belize for the year 1927.

Month	Barometer		Thermometer		Relative Humidity		Wind	Rainfall	
	Highest	Lowest	Highest	Lowest	Highest	Lowest	Maximum Velocity	Inches	Days
January	30.238	29.990	79.5	56.5	100%	81%	30 N.	4.51	12
February	30.104	29.858	82.0	62.5	98%	88%	36 E.	1.98	9
March ..	30.190	29.870	84.5	60.0	98%	84%	27 SE.	2.70	5
April ..	30.110	29.828	84.0	75.0	98%	85%	42 E.	1.16	3
May ..	30.008	29.850	86.0	71.0	97%	85%	30 E.	1.65	9
June ..	29.965	29.740	86.5	71.5	98%	88%	48 E.	2.11	14
July ..	30.018	29.808	86.5	68.0	100%	88%	36 E.	11.63	21
August	29.998	29.748	88.0	69.5	100%	86%	48 E.	6.26	14
September	30.009	29.730	88.0	70.0	100%	91%	36 E.	5.26	13
October	30.000	29.650	86.0	64.0	100%	88%	36 NW.	15.12	17
November	30.138	29.818	86.0	62.0	100%	83%	36 NE.	10.54	21
December	30.006	29.880	82.0	60.5	100%	87%	24 E.	5.69	17
Total ..	360.784	357.770	1,019.0	790.5	—	—	—	68.61	155
Mean ..	30.065	29.814	84.9	65.8	99%	86%	—	—	—

Observations are taken at 6:00 A.M. only from January to May and the month of December, and at 6:00 A.M. and 6:00 P.M. from June to November. Meridian of Longitude adopted for calculation of time as Standard in the Colony :— 90° W. Hours slow of Greenwich Mean Time :— 6 hrs. Longitude of Station :— $88^{\circ} 11'$ W. Latitude of Station $17^{\circ} 31'$ N. Height above mean sea level, 17 feet.

VI. HOSPITALS AND DISPENSARIES.

In the Belize Hospital, in addition to the cases detailed in the Classified Returns appended to this report, 5,263 out-patients were treated during the year. There were 60 major and 70 minor operations.

The building formerly used as a Female Poor House was converted into a Maternity Ward with 12 beds and provision made for the accommodation of 1st and 2nd class private patients. 96 patients were admitted during the year and 70 babies were born.

412 mothers and expectant mothers and 113 children were attended as out-door patients.

The establishment of this Maternity Service in connection with the Belize Hospital has been of great benefit to the inhabitants of the town and its establishment has satisfied a long felt want.

The building formerly used as a Male Poor House has been re-constructed into a Male Venereal Ward of 12 beds with special dressing and bath rooms.

The former Venereal Ward in the General Hospital has been converted into a Male Surgical Ward.

Additional nursing advantages have been provided during 1927 by the establishment of a 6 months' course of training in Midwifery, consisting of Practical Work, Lectures and Examinations.

There are 5 District Hospitals, each in charge of the Assistant Medical Officer of the District.

VII. PRISONS AND LUNATIC ASYLUM.

The Prison is a well managed institution ; the grounds and individual cells and out-buildings have been maintained in an excellent sanitary condition.

The average daily number of prisoners was 53.

The average weekly number on the sick list was 2.

The cases treated were ordinary minor ailments.

In the Lunatic Asylum there were 9 patients admitted during the year, 8 discharges and 15 deaths.

REPORT BY DR. W. JOHNSON, ASSISTANT MEDICAL OFFICER,
COROZAL DISTRICT.

VITAL STATISTICS.

The population of the District is estimated at 7,336. Of this total, 2,079 live in the town of Corozal. Progreso is the largest settlement in the District.

Births. There were 282 births registered during the year of which 150 were males and 132 females. Of these, 129 were Indian, 31 Negro and 122 Other Races.

Deaths. There were 154 deaths registered. Of these, 79 were Indian, 16 Negro and 59 Other Races.

There were 77 deaths among males and 77 among females.

35 deaths occurred under the age of 1 year and 15 deaths under the age of 12 years.

There were 51 deaths registered by a Medical Practitioner and 103 by the District Commissioner. The chief causes were as follows:—Fever 30, Gastro Intestinal trouble 29, Respiratory trouble (apart from Pulmonary Tuberculosis) 33, Diarrhoea 22, Dysentery 3, Pulmonary Tuberculosis 3, Snake Bite 2. The number of deaths attributed to Phthisis is rather misleading, probably many of the deaths registered as being due to fever and cough were probably Tuberculosis.

HOSPITAL.

In addition to the Assistant Medical Officer, the Hospital Staff consists of one Nurse, two Probationers, one Ward Maid, one Cook and one Messenger.

The Hospital is a one storied building raised about eight feet off the ground and contains twelve beds. As it faces East it gets the full benefit of the sun and also the prevailing breeze.

The Hospital has now an electric lighting plant installed which was purchased by means of public subscriptions. Great credit is due to my predecessor Dr. G. H. Lewis for his untiring energy in obtaining the subscriptions for the payment of the same.

The Nurses Quarters are situated in the building. For reasons of ventilation the walls dividing the wards and the Nurses Quarters do not reach the ceiling, so that nurses while off duty are disturbed by anything that may occur in the wards and they eat, sleep and spend their time off duty in a Hospital atmosphere. This is a matter very much to be regretted and one that tends to have very deleterious effects on the Nursing Staff. There is no Isolation Ward but one is very much needed.

Admissions to Hospital. During the year, 197 patients were admitted to Hospital. Of these, 35 were suffering from Malaria in some form or other. There were 2 deaths from this source. There were 20 cases of Dysentery admitted, with 2 deaths.

There were 10 deaths in the Hospital. Causes of death as follows :— Accident 1, Dysentery 2, Malaria 2, Meningitis 1, Carcinoma 1, Abscess Liver 1, Senile Bronchitis 1.

Vaccination. There were 67 cases of successful primary vaccination. The lymph supplied from about June to September, the results were practically nil.

RAINFALL.

			<i>Inches</i>
January	..	..	1.800
February	..	..	1.374
March	..	..	.900
April ..	..	..	.650
May ..	..	..	1.174
June	..	..	4.250
July ..	..	..	6.774
August	..	..	3.000
September	..	..	8.300
October	..	..	10.374
November	..	..	7.100
December	..	..	5.600
			<hr/>
			51.296
			<hr/>

SANITATION.

The Local Board of Health which consists of the District Commissioner (Chairman) the Assistant Medical Officer (*ex-officio*) and six members of the District Board (appointed by the Governor) constitutes the administrative body and employs two Sanitary Inspectors, whose chief duties are anti-mosquito work, inspection of yards, latrines, wells, drains, slaughter house, and cemeteries, &c.

WATER SUPPLY.

The chief water supply of the town of Corozal is rain water, which is stored in wooden vats or cisterns of iron or cement. Of these, there are 430 and in addition to these vats, a large number of the poorer inhabitants store water in barrels. The proper supervision of the screening or oiling these very considerably increases the work of the Sanitary Inspectors. In addition to the above, there are 408 surface wells, the depth of which on an average is about 6 ft. The prevention of mosquito breeding in vats and wells has been greatly enhanced by the introduction of larvivorous fish. The screening of vats has never been entirely satisfactory owing to the constant changes in the temperature causing either extension or expansion of the wood work of the vats. This in many instances is sufficient to cause the drawing of the tacks used for fixing the wire screening.

The small fish known locally as “ Poopsie ” is used for vats and wells and keeps down all larvae and lives for a long time. The majority of vats are now fished. Each vat has a number tacked on it and if fished the letter “ F ” is also tacked on.

All vats are inspected bi-monthly by the Inspectors and reported on as to their condition.

The District Board have six large vats for distribution of water to those in need of it during the dry season.

Disposal of Refuse. Householders place their refuse in a receptacle near their dwelling, from which it is removed in open carts by the scavengers to one of two dumping pits (outside the town limits) where it is burnt.

Sewage. There is no sewage system. The pit system is the most used, there being 425 in the town of Corozal. There are 8 latrines erected on the shore and projecting over the sea. One of these is a public one and under the direct supervision of the Board. There are 12 flushing water-closets, 7 of which empty into septic tanks and five empty directly into the sea. In other cases, the slop bucket system is used, but only in 19 instances. These are emptied in the sea.

Clearance of Bush, &c. All lots and yards in the town are kept free from undergrowth; the owners or occupiers as a rule comply readily when served with notices to do so.

General Conditions in the District. I have visited several of the ranches in the District, also Consejo. I found them all in a clean and satisfactory condition. The other settlements I have not had time to visit.

Prison. I have inspected the Prison on more than one occasion and found it clean and in good order.

Market and Slaughter House. These are kept clean and in fairly good order.

Food Supply. Meat is supplied chiefly in the form of pork. Beef is supplied once or twice weekly. Fish is scarce and very irregular in its supply.

Fruit and Vegetables. Oranges and grapefruit of excellent quality are abundant in season and so are cabbages and tomatoes.

REPORT BY DR. T. PATTERSON, ASSISTANT MEDICAL OFFICER,
CAYO DISTRICT.

I. ADMINISTRATIVE.

Staff.

The Hospital Staff in Cayo consists of the Assistant Medical Officer, the Nurse in Charge, one District Probationer, a Ward Maid, a Cook, and a Hospital Messenger. At Benque Viejo a Sister from the Convent has charge of the Government Dispensary.

A Sanitary Inspector, under the Central Board of Health, is stationed in Cayo.

Financial.

Hospital and Dispensary fees amounted to \$570.00.

Expenditure under the following headings was incurred :—

Hospital Staff, Salaries	..	..	..	..	..	\$1,185.21
Duty Allowances	..	..	..	..	..	240.00
Nurse in Charge, Benque Viejo Dispensary	..	..	..	..	..	240.00
Dieting Allowance to Nurse in Charge of Hospital	..	..	..	..	..	150.00
Hospital Dieting	..	..	..	..	..	1,272.92
Washing	..	..	..	..	..	42.27
Lighting	..	..	..	..	..	31.97
Equipment	..	..	..	..	..	30.04
Sanitary Inspector, Salary and Duty Allowance	..	..	..	..	..	592.50
Total	..	..	..	..	..	<u>\$3,784.91</u>

The above is exclusive of the Assistant Medical Officer's emoluments.

II. PUBLIC HEALTH.

General Remarks.

Dysentery.—This disease was not unduly prevalent until July when there was an increase in the number of cases. Some of the cases were not easily responsive to Emetine. The mortality was low among treated cases, but apparently higher where treatment was neglected, especially in children.

Leishmaniasis.—Very few seek treatment for “Bay Sore,” the commonest form of this disease in the District, but the few cases dealt with responded well to drugs. Apparently this complaint can be cured readily if patients will take a little time and trouble. Women rarely are affected.

Tuberculosis.—There were five cases treated in hospital, with one death. Many others were seen in their homes.

Tetanus.—Two cases of Tetanus were admitted to Hospital within a week of one another in the month of December. Both were children who contracted the disease three or four days after a wound of the foot, *i.e.* showed clinical signs. Neither case had received a prophylactic injection of serum. Both were given intravenous and intrathecal injections after admission to Hospital, but death occurred in both cases shortly afterwards.

Pneumonia.—Six cases were admitted to Hospital, and two of these died. There was not so much Pneumonia this year compared to 1926.

Gastro-enteritis.—A mild form of Gastro-enteritis occurred among children during April and August. A few serious cases ended in death. These patients are difficult to deal with as their parents have their own ideas on dieting.

Whooping Cough.—A small epidemic of Whooping Cough occurred in December, chiefly in Benque Viejo.

Helminthiasis.—Hookworm is very common in this District. The faeces of all suspicious cases are always examined, with but few negative results. Most children are infected with round worm, and thread worm is widespread. Whip worm is common, and tape worm exists.

Venereal Disease.—Cayo and Benque Viejo are full of Gonorrhoea. The disease is very difficult to cure. In the first place, patients will not report until they have been sick for several weeks or months. In the second place they are apt to be discouraged if they are not cured in a few days. They want to be cured, but without trouble to themselves. As a result the disease is rapidly gaining ground.

Vital Statistics.

Population of District (Census 1921)		5,464	
Population of Cayo Town		1,237	
Population of Benque Viejo		1,097	
	<i>Registered Births</i>	<i>Registered Deaths</i>	<i>Deaths one Year and under</i>
Indian, Male ..	27	24	3
Female ..	29	21	3
Negro, Male ..	34	19	5
Female ..	28	12	4
Others, Male ..	54	31	4
Female ..	63	36	12
	<hr/>	<hr/>	<hr/>
	235	143	31
	<hr/>	<hr/>	<hr/>

Forty-one deaths were certified by Qualified Practitioners, and seven by the Coroner.

III. SANITATION.

Administrative.

A law has been passed making Cayo Town a prohibited area for cattle from April 1st, 1927. The streets have since been much more free from animal refuse, the removal of which had been previously a matter of difficulty. It has also been made illegal in Cayo and Benque Towns to build houses with palm-thatched roofs. This measure is, of course, not Hygienic, but entirely commercial. The inhabitants of rows of zinc-roofed houses, during the hot months, will be considerably more uncomfortable than those who can still live in a picturesque palm-thatched abode.

Preventive Measures.

Since November, the Sanitary Inspector has been making monthly visits to Benque Viejo, staying there a sufficient number of days to make a thorough inspection. The result has been a great improvement in the cleanliness of yards and in the efficiency of mosquito screening on vats and other water receptacles. The condition of latrines is also distinctly better.

Monthly inspections of Cayo and Benque Viejo are made in both towns and reports are made to Belize. Sanitary conditions are gradually improving.

Vaccinations have been none too successful, owing partly to the state of the lymph received, and partly to its quick degeneration when there is no ice available to keep it cool.

It is almost impossible to build a fly-proof latrine, with the object of lessening the carriage of dysentery germs. The pouring of crude oil into latrines and the destruction of likely fly-breeding places are the only measures possible.

There has been no campaign against Hookworm this year, but all cases met with were treated. A campaign of some sort is necessary for 1928.

General Measures.

The towns of Cayo and Benque Viejo are both well drained by their natural slope toward the rivers. Benque Viejo is well supplied with cement drains, and Cayo has a fair supply, but more are needed. At present pools form in those drains that are not made of cement whenever there is much rain, in spite of the fact that the ground soaks up moisture very readily.

The clearing of bush in the Towns has been carried out in a satisfactory manner. Cleaning just outside the town is not so good.

Measures taken to spread Knowledge of Hygiene and Sanitation.

A certain number of lectures were given to the school teachers of the District by the Assistant Medical Officer.

Recommendations for future Work.

An anti-helminthic campaign of some sort is necessary in 1928. Cayo Town is in need of two or three more cement drains.

IV. METEOROLOGY.

The following records have been kept. The height of the cistern of the Barometer is unknown and the Barometric readings are uncorrected.

	Rainfall.		Barometric Readings.		Temperature.	
	1926 <i>Inches</i>	1927 <i>Inches</i>	(Not corrected) <i>Maximum Minimum</i>		<i>Maximum</i>	<i>Minimum</i>
January	1.265	2.196	30.186	29.888	82	57
February	.291	.693	30.036	29.760	93	62
March ..	1.226	.579	30.142	29.788	93	57
April ..	1.732	.231	29.924	29.770	100	68
May ..	1.356	1.025	29.950	29.737	95	73
June ..	2.163	6.031	29.941	29.732	96	72
July ..	2.088	3.974	30.000	29.836	91	70
August	7.212	5.083	29.980	29.800	90	70
September	4.435	6.057	29.936	29.776	92	71
October	9.267	6.442	29.950	29.710	89	63
November	2.891	8.472	30.130	29.832	90	60
December	2.992	2.269	30.088	29.785	88	61
	<u>36.918</u>	<u>43.072</u>				

V. HOSPITALS AND DISPENSARIES.

It is proposed that a side ward be added to the Hospital in the near future. This ward can be used as a private or for isolation cases. At present the hospital accommodation is inadequate at times. In addition it is suggested that a mortuary be built and that the hospital be screened. The latter is very necessary. An additional vat is required for the hospital and another for the Assistant Medical Officer's quarters.

At the Government Dispensary in Benque Viejo, patients are treated by the Sister in charge, and the Assistant Medical Officer visits once a week.

VI. PRISONS.

The ventilation of the prison is bad at present, but repairs and alterations are about to be carried out. The health of the prisoners is extremely good.

REPORT BY DR. J. E. HOAR, ASSISTANT MEDICAL OFFICER,
ORANGE WALK DISTRICT.

I. ADMINISTRATIVE.

Staff.

Assistant Medical Officer, J. E. HOAR, 1.1.27. to 8.6.27.

Assistant Medical Officer, W. D. FORGRAVE, 15.8.27. to 25.12.27.

For part of the year while no Assistant Medical Officer was stationed at Orange Walk, the Assistant Medical Officer, Corozal, visited when necessary.

Nurse, Miss M. JAMES, 1.1.27. to 3.7.27.

Nurse, Miss M. SHERAN, 4.7.27. to 31.12.27.

District Probationer, Miss E. YORKE, 1.1.27. to 29.11.27.

District Probationer, Miss E. FELIX, 30.11.27. to 31.12.27.

A Ward Maid, Cook, and Hospital Messenger complete the Staff.

Sanitary Inspector, Mr. G. MILLER, 1.1.27. to 31.12.27.

Mr. MILLER visited Belize during the year for a course of instruction in Sanitation.

Financial.

The sum of \$433.00 was collected from patients and paid into the Treasury.

Excluding Assistant Medical Officer's salary, cost of drugs and dressings, furniture, bedding and clothing, &c., the sum of \$2,358.00 was paid out.

<i>Receipts :</i>	Hospital Dues collected	..	..	..	..	\$433.00
						<hr/>
<i>Expenditure :</i>	Salaries of Hospital Staff	..	..	..	..	\$1,085.46
	Food Allowance to Nurse	..	..	..	..	240.00
	Lighting .. ..	..	..	..	..	149.09
	Diet for Patients	..	..	..	..	662.74
	Wood Fuel .. ..	..	..	..	..	68.90
	Washing (includes nurses' uniform)	..	..	..	..	89.15
	Equipment .. ..	..	..	..	..	31.26
	Incidentals .. ..	..	..	..	..	31.52
	Expenses of Burials	..	..	..	..	108.00
						<hr/>
	Total	..	..	..	..	\$2,466.12

II. PUBLIC HEALTH.

(1) GENERAL DISEASES.

Only two cases admitted to Hospital.

(2) COMMUNICABLE DISEASES.

Mosquito or Insect-borne.

Malaria.—This important disease caused one-third (34) of the admissions to Hospital. The improvement in health of those persons who can be persuaded to take adequate doses of quinine for a sufficient time is most remarkable.

III. SANITATION.

General Review.

(1) Preventive Measures.

(2) General Measures of Sanitation.

No changes were made in the above which were the same as detailed in the report for 1926.

IV. PORT HEALTH WORK.

No cases of disease were traced to persons entering the Colony over the western border. These persons are given quarantine permits by the Police and inspection is carried out.

Infectious Diseases.

Whooping Cough, one case. *Dysentery*, eight cases with three deaths. In the absence of bacteriological proof, I am persuaded that not a few cases of apparent dysentery are intestinal malaria. Others — clinically amoebic — clear up rapidly with injections of emetine. They occurred mostly in the autumn months.

Helminthic Diseases.

This was not a source of much disability, though children are almost universally sufferers from round worms. Pit latrines are practically universal.

The rainfall was late and seldom continuous, therefore there were no floods, and standing pools of water were absent. The year as a whole was a healthy one.

Vital Statistics.

Population at census of 1921 was .. 5,607.

Estimated population for 1927 is .. 5,984.

Registration is reliable.

The following Births were registered in 1927 :—

RACE	MALE	FEMALE	TOTAL
Negro	32	20	52
Indian	77	71	148
Others	11	7	18
Total Births	..	..	218

Birth Rate 38 per 1,000 of population of 1921.

In 1926, 39 per 1,000 of population of 1921.

The following deaths were registered in 1927 :—

RACE	MALE	FEMALE	TOTAL
Negro	11	6	17
Indian	58	53	111
Carib	1	1	2
Others	11	12	23
Total Deaths			153

Death Rate 27 per 1,000 of population of 1921.

In 1926, 29 per 1,000 of population of 1921.

The Infant Mortality was 37 deaths under 1 year, giving a rate of 170 per 1,000 births.

In 1926 the rate was 209.

European Officials. There were three only, the District Commissioner and two Assistant Medical Officers. Health good on the whole.

VI. HOSPITAL.

107 cases were admitted to Hospital, divided as follows :—

<i>Sex</i>	<i>Admitted</i>	<i>Cured</i>	<i>Relieved</i>	<i>Not Improved</i>	<i>Died</i>
Male	88	50	27	4	7
Female	19	6	9	1	3
BY CLASSES —					
	Class 1	..	0		
	„ 2	..	0		
	„ 3	..	1		
	„ 4	..	84		
	„ 5	..	17		
	Police	..	5		
	Total	..	107		

In 1926, there were 152 admissions to Hospital. Malaria caused 34 admissions. There was one typical case of Blackwater Fever, which proved fatal.

Dysentery, which was clinically of the amoebic type, in most cases quickly responded to injections of emetine.

Broncho-pneumonia caused six admissions.

Cellulitis caused eleven admissions. As a general rule sepsis is mild.

External injuries caused fifteen admissions.

Electric light was extended to the kitchen, and a light was also placed outside to light the various doorways under the building.

That part of the Ward floor over the Nurses' quarters below was sealed by putty forced into the cracks between the boards to prevent spilt fluids from dripping on to their food.

A water pipe was installed leading water from the tank to the washroom.

There are signs that work will be commenced early in the new year on the quarters for the Nurse in Charge.

VII. PRISON.

Prisoners usually go out of prison in better health than when admitted. No record of treatment available.

Police. Ten constables reported sick sixteen times. Of these, four were admitted to Hospital (three for malaria).

Ventilators were installed on the roof of the Prison.

VIII. METEOROLOGY.

Rainfall only is kept. The apparatus is makeshift and is liable to error.

	1925 Inches	1926 Inches	1927 Inches
January ..	7.05	5.18	2.67
February ..	.70	.14	1.65
March ..	.30	1.23	.90
April ..	.25	.80	.24
May ..	5.40	1.38	.12
June ..	10.53	2.83	4.63
July ..	3.10	2.49	10.41
August ..	7.26	9.54	7.49
September	8.47	7.40	7.25
October ..	7.86	7.24	7.47
November ..	10.00	2.27	3.61
December ..	5.20	1.07	5.54
Total ..	66.12	41.60	51.98

REPORT BY DR. C. S. VAN R. HARWOOD, ASSISTANT MEDICAL
OFFICER, STANN CREEK DISTRICT.

I. ADMINISTRATIVE.

Staff.

Dr. C. S. HARWOOD, Acting Assistant Medical Officer.

Miss C. ARNOLD, Nurse-in-Charge.

Miss L. ARNOLD, Nurse-in-Charge.

Miss A. DEBRAUND, District Probationer.

Miss L. BLANCO, Ward Maid.

Miss R. SEBASTIAN, Ward Maid.

Mr. H. WESBY, Sanitary Inspector (Central Board of Health).

Mrs. J. LESLIE, Hospital Cook.

H. FLORES, Hospital Orderly.

The Sanitary Inspector has the services, when necessary, of a boy to act as Helper and Oiler, and, by arrangement with the District Commissioner, I have one cartman and two labourers for the sanitary services of the town and the motor tip-truck is also usually available.

Financial.

Hospital Fees collected during the year amounted to \$713.00, being \$89.00 in excess of 1926.

During the year the cost of maintenance under the heads Dieting, Washing and Lighting was \$2,207.22 or \$0.42 per head per diem as against \$0.46 in 1926.

II. PUBLIC HEALTH.

The health of the town would have been remarkably good throughout the year if it had not been for an out-break of Whooping-cough lasting from February to July. I saw 95 of the severer cases out of a great many more, practically the whole of the younger juvenile population being infected. This epidemic was responsible for 6 deaths and much debility. There were two sporadic cases of Chicken-pox and two outcrops of Pneumonia in August and December, also a slight epidemic of Infantile Enteritis in June was responsible for 5 deaths. Four cases of Puerperal Septicaemia occurred, with two deaths. For none of these cases could midwives be held responsible, two following retained placenta after long transport, and two after difficult instrumental deliveries.

In order of mortality, the Infective Diseases were as follows :—

				<i>Deaths</i>	<i>Cases seen</i>
Pulmonary Tuberculosis	..	..		16	18
Pneumonia	..	..	..	6	15
Whooping-cough	..	..	..	6	95
Malaria	..	..	..	5	?
Infantile Enteritis		..	..	5	9
Dysentery	..	..	..	4	49

As in previous years, the mortality was principally due to the five infective diseases, Malaria, Dysentery, Tuberculosis, Pneumonia and Infantile Enteritis ; and as usual the lung infections headed the mortality.

Of non-infective conditions contributing to the year's mortality, the principal were as follows :—

	<i>Deaths</i>	<i>Cases</i>
Malignant Disease	4	4
Malignant Disease (Presumptive)	2	2
Diabetes	3	6
Apoplexy (undefined)	3	4
Heart Disease	3	?
Complications of parturition ..	2	?

Of the 4 definite cases of Malignant Disease, 3 were Carcinoma of the Uterus and one Sarcoma of the jaw. Diabetes is of fairly frequent occurrence, and usually comes under observation owing to the onset of gangrenous conditions. Among the complications of parturition were two of transverse presentation, one of placenta praevia and two of retained placenta.

Of the 18 certified deaths of infants under 12 months, the causes of death were as follows :—

Prematurity and Maldevelopment 5, Marasmus and Malnutrition 3, Dysentery and Enteritis 3, Pneumonia 2, Whooping-cough 2, Tetanus Neonatorum 2, and Malaria 1.

Pulmonary Tuberculosis.

During the past four years, the following has been the incidence and death-rate from this disease :—

	<i>Cases</i>	<i>Deaths</i>
1924 ..	12	11
1925 ..	17	9
1926 ..	21	12
1927 ..	18	16
	—	—
	68	48
	—	—

Grouping according to age and sex, the above deaths may be classified as follows :—

<i>Age Group</i>	<i>Male Deaths</i>	<i>Female Deaths</i>
1 to 15	0	4
15 to 25	4	7
25 to 35	2	9
35 to 45	2	4
45 to 55	2	8
Over 55	4	2
	—	—
	14	34
	—	—

These figures show that more than twice as many females died of Pulmonary Tuberculosis during the past four years as males. The number is altogether too small to permit of drawing any conclusions, beyond the surmise that the menfolk, being frequently from home, and in the main less in the house than the women, on whom devolves the care of the sick, are less exposed to massive infection from advanced cases. The fact remains, however, that twenty women during the childbearing period of fifteen to forty-five lost their lives, involving thereby a potential loss to the population of probably at least forty lives in addition.

The facts that have impressed themselves on me during the past four years as regards the spread of this disease are—

(1) *Bad Housing.* Though with greater facility in obtaining lumber the type of houses is steadily improving, there are still too many of the “ wild cane ” hut variety, with flat iron roofs that render them very hot, and owing to the absence of windows, extremely ill-ventilated ; and with mud floors conducive to spitting. The custom also of erecting such huts between the piles of super-incumbent dwellings, which is very prevalent, should be prohibited.

(2) *Overcrowding.* The greater part of the population bring up their families in two roomed houses, obtaining such privacy as they can by subdividing the already cramped cubic capacity by flimsy curtains or paper cubicles.

(3) Absence of any intelligent attempts to take proper sanitary precautions as regards the care and nursing of the sick. Advanced and highly infectious cases are nursed in small, ill-ventilated, overcrowded dwellings, often occupying the same bed with other members of the family, and such supposed disinfection of the sputum as may be said to be carried out, is ineffective and often misdirected. It is hardly surprising that under such circumstances chains of cases occur as I have previously reported.

As I mentioned last year, a resolution was passed by the Carib Development Society of this town, supported by the District Board, petitioning that adequate isolation and disinfection provision be made to render the notification of Pulmonary Tuberculosis as an Infectious Disease effective. A site was chosen with the approval of His Excellency the Governor and the Hon'ble Principal Medical Officer for two small open-air wards under the Male Ward of the Hospital, to accommodate four patients. So far the matter is in abeyance. In a small community like this, I think it not unlikely that the suggestion I made in my report for 1925, for the loaning out of small portable huts, might prove more practicable, and at the same time much more economical, both as regards initial cost of construction and administrative expenses subsequently, than the provision of Hospital Isolation. As the population do not take kindly to hospital treatment, and this, as in other parts of the world, especially applies to the tuberculosis section, to be effectual, removal to an isolation ward will in many cases only be carried out under compulsion, and might even lead to the hiding of the disease; whereas the loaning of a small wood shelter (under adequate safeguards) that could be set up in the patient's yard, would I am sure in most cases, if not all, be welcomed. It must not be thought that the people are not aware of the infectiousness of this disease. They are fully aware of it. This is shown by the eagerness for disinfection of premises after a death. In three instances, I have had the whole dwelling destroyed without the least opposition.

The construction of four such shelters, made in sections for transport, should not cost very much and would avoid the heavy usual annual expenditure on a nurse, dieting, and washing, &c., under a hospitalization regime. This would do away with the element of compulsion in isolation and would at any rate reduce the liability to infection of those actually in attendance on the sick, instead of the whole family as at present. Any scheme for the provision of medical treatment and necessities for the sick could be as effectually carried out under such a system, and with much more economy than in a Hospital.

I have dealt at some length upon this matter as I consider that all means possible should be applied to reduce the incidence of a disease that was responsible for about one third of the total adult deaths I certified this year.

Malaria. The incidence of Malaria has this year been undoubtedly less. This in the main I think due to the continually increasing use of Quinine at the outset. There appears to have been a steady fall in deaths from this cause from 11 in 1924 to 5 this year.

Dysentery was less prevalent than other years, 48 cases only having been seen by me as against 97 in 1926.

Ankylostomiasis. Mr. Esquivel, the Hookworm Officer, completed his inspection in the early months of the year and reported that 46.75% of that part of the population of the town that he examined were infected. His results for other parts of the District were tabulated last year. I think that a certain number of the *Dysentery* cases, especially among children, might be more correctly classified under this heading. Also as the result of examinations and treatments in hospital I have found some cases of fever, clinically resembling *Malaria*, but resistant to Quinine, to respond to Hookworm treatment. During this year, I have treated a considerable number of patients for this infection, and I should say about 30% of the 333 patients admitted to Hospital were examined for *Necator ova*. Altogether 61 were found positive and received one or more treatments except when purposely omitted for some reason. The bulk of these patients had been admitted for other complaints, but in many cases showed material benefit subsequent to treatment.

Only one death was certified as due to Hookworm.

Venereal Disease. My impression is that these diseases are on the increase, especially as regards Syphilis. This disease more frequently comes under treatment but for a very limited period, and one can only aim at rendering the patient non-infective. Gonorrhoea is rife and remains in the main untreated. Rheumatism of Gonococcal origin is very prevalent.

Vital Statistics.

				<i>Town</i>	<i>Whole District</i>
Births	..	..	..	110	190
Births (Legitimate)	..	..	..	—	93
Births (Illegitimate)	..	..	..	—	97
Deaths (Total)	..	..	..	111	127
(Medically certified)	..	..	..	98	98
(Under 12 months)	..	..	..	24	32
Infantile Mortality (Deaths per 1000 Births)	..	..	..	218.1	168.4

There has been a considerable rise in the number of deaths. This is due to the excessively high death rate amongst children; the Infantile Mortality Rate this year has been over twice as high as in 1926. This is I consider due in part at any rate, to the epidemic of Whooping-cough and its debilitating influences, and also to the Enteritis I have already referred to.

RAINFALL.

	<i>Inches</i>	<i>Rainy Days</i>	<i>River in Flood</i>
January ..	7.02	7	
February ..	.50	1	
March ..	2.52	3	
April ..	.37	1	
May ..	.74	2	
June ..	2.71	4	22nd June
July ..	14.56	16	4th July
August ..	5.77	10	
September ..	6.97	10	
October ..	15.20	14	16th October
November ..	17.19	13	8th, 12th and 15th November
December ..	4.50	8	
Total ..	78.10	94	

SANITATION.

The conditions as regards Mosquito Breeding are in no way different from those mentioned in previous reports. The amount of bush remains the same, but Mr. Wesby, the Sanitary Inspector, has effected a slight improvement in Bluefields section by having a ditch dug that carries off some of the water that accumulates during flood time. In all about 258 yards of ditching was done during the year. The difficulty is keeping such ditches cleaned owing to lack of funds. Fortunately during the rainy season the water in the permanent swamps of that period is well supplied with fish, and the more superficial soon percolates under the porous sand soil, but there are still limitless opportunities for mosquitoes to breed.

Three lots were satisfactorily filled during the year by private persons, which may be said to sum up the amount of enterprise and useful endeavour in that direction, for which, owing to exceptional circumstances, there were special facilities during the dry season.

Through an application to the Central Board of Health, the Executive Council has made a Free Grant of two lots in Bluefields to the District Board for the purpose of experimental filling ; the District Board to recoup itself out of the enhanced value of the land. It is to be hoped that the experiment may prove a sufficient success to warrant an extension of the idea, to the ultimate improvement of this area.

There are about 790 houses in the town and 166 water vats. These are regularly inspected once a month by the Sanitary Inspector, with a view to seeing that the Regulations of the Central Board of Health are carried out. As well as being screened, all vats are now said to have been "fished." In a town where a considerable proportion of the population obtains its water from the river at all seasons, the great number of barrels are difficult to control. The highest Index was 2.6%. With the exception of Government property, only one other house is screened.

Little structural work of medical importance has been carried out during the year. With the abolition of the useless quarantine huts by the Central Board of Health, one of them has been re-erected at the Hospital and converted into an Office for the Sanitary Inspector and Quarantine Inspection Room. A cattle and pig pen has been put up at the Slaughter House and the condition of the latter and the Market may now be considered as sanitarily satisfactory.

There is great need of structural alteration at the Prison. Though the cubic capacity is sufficient for about 7 prisoners, there have been at times as many as 12. This, owing to Prison regulations, leads to much overcrowding in cells, while the state of ventilation of certain cells is extremely bad.

Food Supply.

Two Bakeries are on the Register and conform to regulations, though prosecution was necessary in one case. The only outbreak of food-poisoning of any importance was one due to the sale of local cheese made by an unwholesome process that has now been prohibited. Two pigs were condemned as unfit for food, being found on slaughter to be tuberculous. They were both from the same district.

Vaccination.

This work has during the year been much more efficient and the lymph received in the main of excellent quality.

The work carried out by myself and the Public Vaccinators in the out-stations of the District has been as follows :—

	<i>Successfully Vaccinated</i>	<i>Births</i>
Stann Creek Town	155	110
Seine Bight ..	68	28
All Pines and Sittee	7	21
Mullins River ..	14	16
Commerce Bight	0	12

The work of vaccination has many difficulties and lacks co-ordination, while there is apparently much deterioration of lymph after its arrival at the out-stations.

Removal of Waste Matters.

Latrine accommodation in the town is remarkable for its absence, only 126 of the 790 houses having any at all, and then usually very primitive. In most houses a bucket is secreted somewhere on the premises. This is supposed to be emptied into the sea between certain hours, but the bush is a great temptation and is always readily available. There are 7 installations of septic tanks in satisfactory condition. The 6 Public pier latrines only serve the male population and chiefly by day. The Catholic School is provided with septic tanks of sound construction, but neither the Church of England nor the Wesleyan Schools have adequate or satisfactory latrines.

It has been suggested to me more than once that pit latrines, of one type or another, might be introduced into the town. After careful consideration however, I am of opinion that though the present system is undoubtedly conducive to the spread of hookworm, the risk is less than the possible introduction of Enterica. A large part of the town is subject to flooding, and in heavy rains there must be free percolation through the porous sand soil into the river, which at present affords the drinking supply of the bulk of the population. Any system of pit latrines would require for their construction, maintenance and supervision more inspection than is at the present time available. Accordingly I think it is safer to endure the present ills until financial conditions improve and a safer water supply is provided.

For the collection of refuse, 30 bins of uniform type are distributed at suitable points about the town, and the collection from these, as well as from the numerous private receptacles, is now principally carried out by the motor tip-truck. This material, mostly dry and inoffensive, has at present to be disposed of by the primitive method of dumping into hollows in the ground, being much sought after by the owners of low-lying lots.

The Government Industrial School, Pomona.

This institution was opened for the reception of boys in April and had admitted 44 by the 31st of December. There is a large dining-room with dormitory above and these with the surrounding verandahs are screened. There is a well equipped screened kitchen and spray drinking fountains are provided for the boys. A permanent water supply laid on from a neighbouring spring has enabled sewage disposal to be carried out on a water-closet system by an anaerobic subsoil filtration process that so far seems to have worked satisfactorily. There is a small hospital for boys incapacitated by minor ailments, and where these and casualties are treated by the Matron, who furnishes me with a monthly report. The low rate of sickness is shown by the fact that I have only admitted two boys to the Stann Creek Hospital, one for dental extraction and the other for hookworm. The chief cause of disablement appears to be fly-bites, the result of attacks from the prevalent botlass and sandflies. The incidence of malaria appears to be low, and the general healthy condition of the boys may be attributed to the wholesome and abundant diet and airy sleeping quarters. I visit this institution as often as my other work permits.

The Stann Creek Hospital.

As a result of complete re-arrangement, the Hospital will now accommodate 20 patients in the three wards. The highest number on any one day was 22.

			<i>Males</i>	<i>Females</i>	<i>Total</i>
Remaining from 1926	..	..	7	3	10
Admitted during the year	..	..	221	112	333
Remaining 31.12.27	..	..	8	5	13
Died in Hospital	..	..	11	8	19

A classified list of the diseases that came under treatment is appended.

During the year 16 cases of Lobar Pneumonia were treated, with a total mortality of 5. These included adults and children over 8 years. Eleven of these cases, several very severe, were treated by rectal injections of potassium permanganate recently advocated, and the mortality among these injected cases was only 18%, there being only two deaths. Also the average duration of stay in Hospital for the nine cured cases was 14 days. One or two cases manifested the dramatic abatement of symptoms that has been described. The treatment, whatever its rationale, is simple to carry out, but as sometimes three or four patients were under treatment at one time, and each received about five injections per day, the labour on the staff was considerable. It seems especially suitable for young subjects.

Three cases of Cutaneous Leishmaniasis were treated by intravenous injections of Antimony. One case of many years standing and very extensive had all ulcers healed after 35 injections, but is still under observation. The second, of ten years duration and extensive, was healed in 12 injections but has been readmitted for a slight recurrence. A third and early case was completely cured with 14 injections.

Eight labours were conducted in Hospital, four being complicated and with one death from Placenta Praevia.

Surgical work in the Hospital suffers from lack of any sterilising equipment for dressings and bad lighting at night.

REPORT BY DR. W. A. S. GEORGE, ASSISTANT MEDICAL OFFICER,
TOLEDO DISTRICT.

I. ADMINISTRATIVE.

Staff.

Dr. W. A. S. GEORGE, Assistant Medical Officer.

Mr. J. A. GENTLE, Sanitary Inspector.

Miss E. A. HAYLOCK, Nurse-in-Charge.

Miss M. ARNOLD, District Probationer.

Miss L. DeBRIDE, Ward Maid.

N. CALIZ, Cook.

E. MARTINEZ, Messenger.

The only change in staff was in regard to the messenger. Barker left and Martinez took his place in December.

II. PUBLIC HEALTH.

On the whole, the Public Health of this district was satisfactory.

Twenty-two cases of Malaria were treated in the Hospital, also 5 cases of Dysentery, 8 of Tuberculosis, 6 of Syphilis, 6 of Bronchitis, 6 of Ankylostomiasis and 2 of Leishmaniasis.

There has not been any serious epidemic of any kind, though a bad form of Influenza was prevalent for a while and I believe accounted for a number of the deaths in the outlying district villages.

Vital Statistics.

Estimated population	..	5,350
Total Births	.. ..	236
Total Deaths	.. ..	157

Out of the 157 deaths, 21 were certified by the Medical Officer, 6 by the Coroner, 16 by the Police and 114 were uncertified.

Infantile Mortality.

Number of deaths of infants under one year	.. ..	34
Number of deaths of infants over one year and under five years	..	19

Comparative statement of Births and Deaths for the past six years:—

	1922	1923	1924	1925	1926	1927
Births	267	228	245	242	215	236
Deaths	176	148	238	135	221	157

III. SANITATION.

Weekly inspections were made in Punta Gorda and monthly inspections in Monkey River.

Punta Gorda has 278 houses, 82 vats, 50 barrels, and 26 wells.

Monkey River has 118 houses, 27 vats, 80 barrels and 25 wells.

All vats and barrels are properly screened and wells where not properly covered are stocked with fish.

Total number of vats inspected by the Sanitary Inspector for the year, 4,200.

Total number of barrels inspected by the Sanitary Inspector for the year, 3,360.

Total number of wells inspected by the Sanitary Inspector for the year, 1,536.

Total number of houses inspected by the Sanitary Inspector for the year, 14,724.

All pools and stagnant water or any water suspicious of breeding mosquitoes are oiled by the Sanitary Inspector on his rounds.

39 notices were served on dirty lots for the year.

13 notices were served on defective vats for the year.

Public latrines in Punta Gorda are built over the sea.

Public latrines in Monkey River are built over the creek and one over the sea.

Vaccination.

The Public Vaccinators throughout the District were supplied periodically with vaccine, which has on the whole given good results.

Total number of successful vaccinations for the year 175

IV. PORT HEALTH WORK.

849 vessels entered Punta Gorda during the year. A large number of these were small crafts from Guatemala.

1,998 persons reported for medical observation during the year. No cases of infectious disease occurred.

Water Supply. In Punta Gorda, the supply is chiefly rain water in vats. There is a possibility in the near future if funds will permit of Punta Gorda obtaining a piped supply of good potable water.

In the out-districts, the water supply is obtained from running streams.

V. METEOROLOGICAL.

There are really only two seasons in Punta Gorda — the wet and the dry — and it is mostly wet. The rainfall for the year was 137.4 inches.

Except for a week or a fortnight in January or the early part of February, the weather is warm and pleasant and naturally gets warmer during the dry months ; but during the fortnight in January or early February, it is decidedly cold.

RAINFALL.

	Inches	Rainy Days
January ..	7.1	9
February ..	4.5	4
March ..	3.4	5
April ..	2.5	6
May ..	6.8	8
June ..	21.6	21
July ..	31.6	25
August ..	20.2	19
September ..	18.6	17
October ..	5.1	12
November ..	9.9	19
December ..	6.1	10
Total ..	137.4	155

VI. PUNTA GORDA HOSPITAL.

The Hospital contains 8 beds.

The daily average for the year was 4.3.

88 patients were admitted during the year.

5 remained over from 1926.

2 remained over for 1928.

Of the 88 patients —

70 were discharged cured,

8 were discharged relieved,

3 were discharged unrelieved,

5 died,

2 remained over the end of the year.

Hospital fees collected for the year amounted to \$181.25.

VII. PRISON.

The prison was kept in a sanitary condition during the year. The health of the prisoners was good.

Inspections.

All the villages were inspected during the year and every effort taken to improve conditions, treat patients, vaccinate, and inculcate better ideas of hygiene and sanitation amongst the inhabitants.

Remarks.

The Nurse-in-Charge and the Probationer Nurse both had vacation leave during the year.

Sanitary Inspector GENTLE went to Belize to attend a course of instruction in sanitary work under the Chief Sanitary Inspector for a few weeks.

The Medical Officer gave a course of lectures in hygiene to the schoolmasters of the district.

The work of the staff was uniformly good for the year.

REPORT BY MR. J. H. PEACH, CHIEF SANITARY INSPECTOR.

PRINCIPAL MEDICAL OFFICER :

SIR,

I have the honour to submit my report for the year ending 31st December 1927.

Drains.—Drainage is inadequate. The most important surface drain runs through the grounds of the Belize Public Hospital and takes the surface or storm water from a very small area outside the Hospital. This drain is kept clean by the use of prison labour.

Canals.—There are four canals running through the town of Belize from the river to the sea. Three of these are used for dumping night soil into and especially at low tides give rise to offensive smells. At all hours of the day excreta can be seen floating in these canals. The one on the south side of the town was dry or cleaned in 1923.

Public Bath House.—There are no public bath houses in any of the towns of the Colony.

Public Latrines.—All of the public latrines are either erected over the sea, the river or the canals running through the town. Accommodation is for men only and no public latrine accommodation is provided for women. The condition of these latrines has been fairly satisfactory.

Private Latrines.—Many of these are also built in a similar way to the public latrines, that is over the sea or river, but the majority of the population use chamber utensils which are emptied into slop buckets and finally the contents are emptied into the sea at nights or during the mornings. Women can be seen during the day up to 4 P.M. emptying night soil into the canals. See Chap. 180, sec. 20, subsec. 23.

Measures taken to prevent Mosquito Breeding.—In former years a systematic and thorough inspection of all water receptacles was made in Belize once a month, which occupied ten days; but on account of the campaign against land crabs and general sanitary activities this can only be done now on an average of one inspection every six months, the rest of the time being devoted to other sanitary duties. Vats which are not screened have fish put in them (*Getragonopterus aeneus*) which destroy the mosquito larvae. This method was found efficient after experiments had been carried out for a year, as screening wire does not last in this climate for any considerable time. During the rainy season all yards and pools which contain water and do not contain fish are oiled with a mixture of sawdust soaked in crude oil scattered over the surface of the water. I found this to be a better method than spraying and more economical. Infection of water receptacles show the average indices as follows :—

House index 1.25% infection. This is much below the safety factor of 5% of infected houses. Wells 14.9%, Tanks 4.0%, Barrels 19.8%. Other receptacles 5.1%.

Swamp.—Fish (*Mollienisia sphenops*) are depended on to take care of mosquito larvae outside the towns. A similar method of mosquito control is adopted in the other towns of the Colony and the villages on the Rio Hondo between this Colony and Mexico.

Crab Destruction in Belize.—A campaign against land crabs was started during 1926 and continued since. During the year under review 291,077 holes were treated with Cyanogas and 8,255 re-opened holes re-treated out of this number, a matter of 2.8% of holes which had to be given a second dose of Cyanogas. This speaks well for the care and attention given to the campaign by the inspectors. No action is taken against land crabs outside the town on unoccupied and swampy land.

Market and Slaughter House.—Surprise visits are paid by me to the Market and Slaughter House and they have not been kept in as sanitary a condition as they might be. The chopping blocks require refacing. The meat in the market I regret to say is not protected against flies, and dogs are sometimes found wandering and picking up bits of meat that drop from the stalls. There is no medical inspection of butchers. The water supply is inadequate at both the Slaughter House and Market.

Animals are inspected before and after slaughter and butchers have to be certified as competent before being allowed to kill. The system of transporting meat from the slaughter house to the market is unsatisfactory. This system has been improved lately, but there is a great deal of room for more improvement. Transportation is by small boats called dories which are not sanitary and men in dirty clothing are allowed to do the transportation.

Bakeries and Food Protection.—All bakeries in the Colony have to comply with the conditions as laid down in Chapter 53 before being certified, and surprise visits are made by the Chief and Sub-Sanitary Inspectors during their rounds of inspection. There are no regulations dealing with the access of flies to foodstuffs exposed for sale in groceries or shops. Regulations governing the sale of cooked foodstuffs in trays exposed for sale on the streets have not been enforced.

Disinfection of Houses.—Eleven houses have been disinfected with formalin during the year in which Tuberculosis patients have died and the bedding and clothing used by the patients burned.

Foodstuffs destroyed.—785 lb. of cheese, 700 lb. of cod fish, and 11 bags of flour were destroyed as unfit for human consumption, also eleven cases of condensed milk.

Building Regulations.—There are no Building Regulations for the Town of Belize.

Lectures to Staff.—The staff has been lectured when time permits and the out-districts inspectors were brought to town once during the year for a week for the purpose of instruction in simple Sanitation and Hygiene.

GENERAL REMARKS.

Since 1924 the town of Belize has grown considerably. Two hundred and ninety houses have been built and four hundred and eighty-nine lots added to the area. This has been made possible by the cutting of the bush immediately aback of both sections of the town, and has partly relieved the congestion existing in both the labouring classes and the well-to-do. More clearing and filling will be required in the near future. This extension has placed much extra work on the staff which will have to be increased if efficient work is to be carried out. More improved methods of sewage disposal in the better class houses are now adopted and forty septic tanks have been erected during 1926-27.

Out-districts.—Visits were paid by the Chief Sanitary Inspector to Corozal, Orange Walk, Stann Creek, Cayo and Benque Viejo, and inland towns close to the borders of the Peten district in Guatemala, Consejo on the right bank of the Rio Hondo, which divides British territory from Mexican, and check inspections made.

Water Supply.—The water supply of all these towns is similar to Belize, that is, barrels, vats, concrete cisterns, and iron and galvanized tanks are used to conserve the rainfall. Shallow wells are also largely used to augment the supply. The majority of these receptacles have fish (*Getragonopterus aeneus*) in them and those that have no fish are properly screened. Benque Viejo, when I made the first check inspection, had a barrel index of 57.34% of stegomyia mosquito breeding places. This town had never before been visited by a sanitary inspector. The Central Board of Health has instructed the Sanitary Inspector at Cayo, the adjacent town, to spend a week in each month there and as a result the indices have dropped to 18.9% for barrels and for other receptacles 6%.

The mosquito indices of the other towns are kept below the safety factor of 5%.

Latrine Accommodation.—In Stann Creek, conditions are similar to Belize in that there are no private latrines. In the other towns, pit latrines are used. I hope to be able to get the inhabitants of this district to construct latrines similar to those adopted for the country district of British Guiana. The latrines in the various towns which I inspected were not in as sanitary a condition as I would wish, but this will improve, I believe, as the sanitary sense is developed. None of the latrines inspected in any of the towns were fly proof and I have instructed the inspectors to use crude petroleum oil as a larvacide.

Bakeries and Groceries.—Bakeries and Groceries of all the towns are kept in a sanitary condition as also the aerated water factories.

It is my opinion as a trained Sanitary Inspector that the sanitary inspectors of the different districts do their work as efficiently as could be expected considering that they are untrained and taking into consideration the financial condition of the people in their respective districts.

TABLE 1. A. — MEDICAL STAFF, 1927.

OFFICE	NAME	ABSENCE ON LEAVE	REMARKS
Principal Medical Officer	James Cran, O.B.E., V.D., M.D. (Aberd.)	From 3rd to 25th November	Dr. Johnson Acting P. M.O.
Assistant Medical Officer, Belize	F. L. Davis, M.R.C.S. (England), L.R.C.P. (London)		Retired on pension 27th March.
Assistant Medical Officer, Belize Hospital	W. D. Forgrave, M.B., B.Ch. (Belfast), D.P.H. (London)		Dr. Forgrave transferred to Orange Walk on 5th August. Resigned on 25th December.
Assistant Medical Officer	R. E. Gordon, M.B., Ch.B., B.O.A. (Ireland)		Arrived in Colony 28th March. Resigned on 22nd April.
Assistant Medical Officer	W. Johnson, L.M.S.S.A. (London)		Arrived in Colony 1st August.
Radiologist to Public Hospital, Belize	S. Kent Smith, M.D.		Appointed 1st December.
Assistant Medical Officer, Corozal	G. H. Lewis, M.D., Ch.B.(Edin.)		
Assistant Medical Officer, Orange Walk	J. E. Hoar, M.R.C.S. (England), L.R.C.P. (London)	From 20th June to 31st December	Dr. Lewis acted in conjunction with his own duties from 21st June to 15th August; Dr. Forgrave acting from 16th August to 25th December, when he resigned, Dr. Lewis again acting in conjunction with his own duties from 26th to 31st December.
Assistant Medical Officer, Stann Creek	C. S. Van R. Harwood, M.D. (London), M.B.B.S., M.R.C.S. (England), L.R.C.P. (London), D.P.H.		Acting appointment.

TABLE 1. A.—MEDICAL STAFF, 1927 — *continued*.

OFFICE	NAME	ABSENCE ON LEAVE	REMARKS
Assistant Medical Officer, Toledo	W. A. S. George, L.R.C.P. & S. (Edin.), L.R.F.P. & S. (Glasgow)		
Assistant Medical Officer, Cayo	T. Patterson, M.B., B.Ch. (Oxon.)		
TABLE 1. B.—EUROPEAN NURSING STAFF, 1927.			
Matron, Public Hospital, Belize	L. M. Roberts, S.R.N.	From 8th March to 29th May	
Nursing Sister, Public Hospital, Belize	E. Shilleto, S.R.N., C.M.B. Cert.		
TABLE 1. C.—NATIVE MEDICAL SUBORDINATE STAFF, 1927.			
(1) <i>Medical Office.</i>			
Chief Clerk & Accountant, Medical Department	J. F. Romero		
Second Class Clerk	E. Trapp		
Typist	W. Ysaguirre		
Messenger	L. Williams		Resigned 31.7.27.
	W. Scott		
(2) <i>Public Hospital, Belize.</i>			
Dispenser & Storekeeper	P. A. Hyde	From 18th June to 17th September	Vacation leave.
3 Male Attendants	G. Sabido		Also Asst. Dispenser.
	S. Ricketts		
	H. Franklin		
	M. C. Sheran		
Head Nurse			
6 Staff Nurses			
12 Probationers			

TABLE 1. C.—NATIVE MEDICAL SUBORDINATE STAFF, 1927 — *continued*.

OFFICE	NAME	ABSENCE ON LEAVE	REMARKS
(3) <i>Lunatic Asylum, Belize.</i> Head Attendant	F. Clarke	From 1st February to 15th March and from 1st to 22nd August	
5 Male Attendants and 4 Female Attendants			
(4) <i>Poor Houses, Belize.</i> Male Attendant	H. N. Springer	From 1st May to 30th June	
2 Female Attendants			
(5) <i>District Public Hospitals.</i> (a) Corozal — Head Nurse 1 Probationer	A. Cadle		
(b) Orange Walk — Head Nurse 1 Probationer	A. Card		
(c) Stann Creek — Head Nurse 1 Probationer	C. Arnold L. Arnold		Resigned 15th November. Appointed 16th November.
(d) Toledo — Head Nurse 1 Probationer	E. Haylock	From 5th April to 4th May	
(e) Cayo — Head Nurse 1 Probationer	G. Humphrey		

TABLE 2. SANITARY STAFF, 1927.

OFFICE	NAME	ABSENCE ON LEAVE	REMARKS
Chief Sanitary Inspector and Clerk to Central Board of Health	John H. Peach	From 1st January to 11th February	Mr. Arnold acted as C. S. I.
6 Sanitary Inspectors, Belize	Albert E. Arnold	From 1st to 31st May	Dismissed on 16th September. Appointed on 16th September.
	Luis E. Cervantes	From 1st to 30th June	
	Henry A. Flowers	From 1st to 22nd August	
	Ellison S. Skeen	From 1st to 30th April	
	Victor E. Sampson	—	
	Herman M. Fraser	—	
2 Sanitary Inspectors, Corozal	Walter H. Wright	—	
	Manuel J. Villamor		
Sanitary Inspector, Orange Walk	Enrique C. Romero		
	George Miller	From 17th August to 16th September	
Sanitary Inspector, Cayo	John P. Smith		
Sanitary Inspector, Stann Creek	Harold N. Wesby	From 1st November to 31st December	Without pay.
Sanitary Inspector, Toledo	John A. Gentle		

TABLE 3.

BIRTHS and DEATHS, various Districts of the Colony, in 1927, as compared with 1926.

<i>District</i>	<i>Births</i>		<i>Birth Rate per 1000</i>		<i>Deaths</i>		<i>Death Rate per 1000</i>		<i>Population</i>	
	1926	1927	1926	1927	1926	1927	1926	1927	1926	1927
Belize ..	697	640	37.4	33.9	362	305	19.4	16.1	18,587	18,835
Corozal ..	283	282	39.4	38.6	172	154	24.0	21.1	7,165	7,293
Orange Walk	225	210	37.9	35.0	167	156	28.1	26.0	5,930	5,984
Stann Creek	212	191	39.7	35.3	88	127	16.4	23.5	5,340	5,404
Toledo ..	215	236	38.7	41.9	221	157	39.8	27.9	5,548	5,627
Cayo ..	232	235	38.5	38.4	163	143	27.1	23.4	6,014	6,106
Total	1,864	1,794	38.3	36.4	1,173	1,042	24.1	21.1	48,584	49,249

TABLE 4

Infantile Mortality in 1927 as compared with 1925 and 1926.

<i>District</i>	<i>Number of Deaths under one Year</i>			<i>Rate per 1,000 of living Births</i>		
	1925	1926	1927	1925	1926	1927
Belize	74	74	92	115	106	143
Corozal	33	52	34	122	183	120
Orange Walk	32	43	40	149	146	190
Stann Creek	21	12	31	109	56	162
Toledo	29	52	34	119	241	144
Cayo	11	31	26	48	133	110
Total	200	264	257	112	141	137

TABLE SHOWING WORK OF THE SANITARY STAFF, BELIZE,
DURING 1927

<i>Classification</i>	<i>Served</i>	<i>Complied</i>	<i>Prosecuted</i>	<i>Withdrawn</i>	<i>Remarks</i>
Low-lying lots. Notices served	2	2	—	—	
Overgrown lots	463	433	1	—	
Overgrown lots cleared under Private Improvement Expenses	39	—	—	—	
Overgrown Crown lots cleared from General Revenue ..	70	—	—	—	
Clearing and pruning of trees on private premises	1	1	—	—	
Erection of tanks	29	15	1	—	23,081 gallons
Erection of tanks without service of notices	93	—	—	—	286,749 „
Repair of tanks	146	120	4	3	
Tanks erected by Town Board for public use (New)	1	—	—	—	25,000 „ 20' × 20' × 10'
Number of tanks provided by Town Board for public use ..	39	—	—	—	784,338 gallons
Tanks erected by Town Board on the instalment plan	8	—	—	—	10,973 „
Screening of defective tanks ..	40	40	—	—	
Screening of defective wells ..	30	30	1	1	
Tanks to be erected by Town Board on instalment plan ..	56	—	—	—	
Prosecution <i>re</i> unscreened bar- rels, &c.	—	—	21	11	
Prosecution <i>re</i> other receptacles	—	—	6	4	
Prosecution <i>re</i> obstructing Officer	—	—	2	—	
Prosecution <i>re</i> selling unwhole- some foodstuffs	—	—	1	—	
Number of tanks containing fish	1,840	—	—	—	
Septic tanks erected	19	—	—	—	

Crab Destruction 291,077 holes treated. 8,255 holes re-treated.

HOSPITAL—BELIZE.

Return of Diseases and Deaths (In-Patients) for the year 1927.

Diseases	Remaining in Hospital at end of 1926	Yearly total		Total cases treated	Remaining in Hospital at end of 1927
		Admissions	Deaths		
I. EPIDEMIC, ENDEMIC & INFECTIOUS DISEASES.					
1. ENTERIC GROUP —					
(d) Type not defined ..	—	1	—	1	—
5. MALARIA —					
(a) Tertian	—	4	—	4	—
(c) Aestivo-autumnal ..	—	25	3	25	—
(d) Cachexia	—	4	2	4	1
(f) Unclassified	4	93	—	97	3
9. Whooping Cough	—	2	—	2	—
11. Influenza	—	6	—	6	—
16. DYSENTERY —					
(a) Amoebic	1	19	3	20	—
(b) Bacillary	—	3	1	3	—
(c) Undefined	1	9	2	10	—
29. Tetanus	—	4	2	4	—
31 – 37. Tuberculosis	3	55	19	58	4
38. SYPHILIS —					
(c) Period not indicated ..	—	3	—	3	—
39. Soft Chancre	—	23	—	23	—
40. A. Gonorrhoea and its complications ..	1	25	—	26	1
41. Septicaemia	—	1	1	1	—
II. GEN'L DISEASES NOT MENTIONED ABOVE.					
49. Cancer or other Malignant Tumours of Organs not specified ..					
	1	11	2	12	1
52. Chronic Rheumatism ..	3	20	—	23	—
54. Pellagra	—	1	—	1	1
57. Diabetes	—	1	1	1	—
58. ANAEMIA —					
(b) Other Anaemias and Chlorosis	—	3	—	3	—
66. Alcoholism	—	4	—	4	—
III. AFFECTIONS OF THE NERVOUS SYSTEM AND ORGANS OF THE SENSES.					
72. Locomotor Ataxia ..	2	5	—	7	1
74. APOPLEXY —					
(a) Haemorrhage ..	1	4	—	5	—
75. PARALYSIS —					
(b) Other Paralysis ..	—	1	—	1	—
77. OTHER FORMS OF MENTAL ALIENATION —					
	1	6	2	7	1
78. Epilepsy	—	1	—	1	—
82. (A) Hysteria	—	2	—	2	—
(B) Neuritis	—	7	—	7	—
(C) Neurasthenia ..	—	4	—	4	—
85. AFFECTIONS OF THE ORGANS OF VISION —					
(a) Diseases of the Eye ..	1	3	—	4	—
(b) Conjunctivitis ..	—	3	—	3	—
86. AFFECTIONS OF THE EAR—					
Mastoid Sinus ..	—	3	—	3	1

HOSPITAL — BELIZE.

Return of Diseases and Deaths (In-Patients) for the year 1927—*continued*.

Diseases	Remaining in Hospital at end of 1926	Yearly total		Total cases treated	Remaining in Hospital at end of 1927
		Admissions	Deaths		
IV. AFFECTIONS OF THE CIRCULATORY SYSTEM.					
90. OTHER DISEASES OF THE HEART —					
(a) Valvular	—	18	4	18	2
92. Embolism or Thrombosis (non-cerebral) ..	—	1	—	1	—
93. DISEASES OF THE VEINS —					
Haemorrhoids	1	2	—	3	—
Varicose Veins	—	2	—	2	—
94. DISEASES OF THE LYMPHATIC SYSTEM					
Lymphadenitis, Bubo (non-specific) ..	—	15	—	15	—
96. Other Affections of the Circulatory System	—	2	—	2	—
V. AFFECTIONS OF THE RESPIRATORY SYSTEM.					
98. AFFECTIONS OF THE LARYNX —					
Laryngitis	—	2	—	2	—
99. Bronchitis — not classified	1	14	—	15	1
101. PNEUMONIA —					
(b) Unclassified ..	1	24	12	25	—
102. Pleurisy, Empyema	—	3	—	3	—
105. Asthma	1	2	—	3	—
107. OTHER AFFECTIONS OF THE LUNGS —					
Pulmonary Spirochaetosis	—	1	—	1	—
Pneumo-Thorax ..	—	1	—	1	—
VI. DISEASES OF THE DIGESTIVE SYSTEM.					
109. AFFECTIONS OF THE PHARYNX OR TONSILS—					
Tonsilitis	—	6	—	6	—
111. A. Ulcer of the Stomach	—	2	—	2	—
112. OTHER AFFECTIONS OF THE STOMACH —					
Dyspepsia	—	15	1	15	—
114. DIARRHOEA & ENTERITIS	—	14	5	14	—
Colitis	—	3	1	3	—
115. Ankylostomiasis ..	—	4	—	4	—
116. DISEASES DUE TO INTESTINAL PARASITES —					
(c) Nematoda other than Ankylostoma.					
Ascaris	—	5	1	5	—
(f) Unclassified ..	—	3	1	3	—
117. Appendicitis	—	2	—	2	—
118. Hernia	—	9	—	9	1
119. B. OTHER AFFECTIONS OF THE INTESTINES —					
Constipation ..	—	7	—	7	—
122. CIRRHOSIS OF THE LIVER —					
(b) Other forms ..	1	3	3	4	—

HOSPITAL — BELIZE.

Return of Diseases and Deaths (In-Patients) for the year 1927—*continued*.

Diseases	Remaining in Hospital at end of 1926	Yearly total		Total cases treated	Remaining in Hospital at end of 1927
		Admissions	Deaths		
124. OTHER AFFECTIONS OF THE LIVER —					
Hepatitis	—	2	—	2	1
Cholecystitis	—	5	1	5	—
127. OTHER AFFECTIONS OF THE DIGESTIVE SYSTEM	1	7	—	8	1
VII. DISEASES OF THE GENITO-URINARY SYSTEM (NON-VENEREAL)					
128 & 129. Nephritis	—	17	5	17	—
131. OTHER AFFECTIONS OF THE KIDNEYS —					
Hydronephrosis ..	—	1	—	1	—
133. DISEASES OF THE BLADDER —					
Cystitis	—	9	—	9	—
134. DISEASES OF THE URETHRA —					
(a) Stricture ..	1	12	—	13	—
136. DISEASES (NON-VENE- REAL) OF THE GENITAL ORGANS OF MAN —					
Orchitis	—	4	—	4	—
Hydrocele	—	2	—	2	—
Varicocele	1	—	—	1	—
Ulcer of Penis ..	—	1	—	1	—
Phimosis	—	1	—	1	—
139. Uterine Tumours (non-malignant) ..	—	5	1	5	—
141. A. METRITIS — ..	—	8	—	8	—
B. OTHER AFFECTIONS OF THE FEMALE GENITAL ORGANS —					
Displacements of the Uterus	—	2	—	2	—
Ovaritis	—	1	—	1	—
VIII. PUERPERAL STATE.					
143. B. ACCIDENTS OF PREGNANCY —					
Abortion	—	3	—	3	—
143. C. OTHER ACCIDENTS OF PREGNANCY—					
Hyperemesis gravidarum	—	2	—	2	—
146. Puerperal Septicaemia	—	2	2	2	—
148. Puerperal Eclampsia	—	2	1	2	—
149. Sequelae of Labour ..	—	1	—	1	—
IX. AFFECTIONS OF THE SKIN AND CELLULAR TISSUES.					
152. Boil. Carbuncle ..	—	1	—	1	—
153. Abscess	1	14	—	15	—
Cellulitis	—	9	4	9	—
154. B. Scabies	—	2	—	2	—

HOSPITAL — BELIZE

Return of Diseases and Deaths (In-Patients) for the year 1927— *continued*.

Diseases	Remaining in Hospital at end of 1926	Yearly total		Total cases treated	Remaining in Hospital at end of 1927
		Admissions	Deaths		
155. OTHER DISEASES OF THE SKIN —					
Eczema	—	3	—	3	—
Herpes	—	1	—	1	—
Cutaneous Leishmaniasis	—	5	—	5	1
Necrosis	—	2	—	2	2
Impetigo	—	2	—	2	—
Ulcer	1	15	—	16	2
X. DISEASES OF BONES AND ORGANS OF LOCO- MOTION (OTHER THAN TUBERCULOUS)					
156. DISEASES OF BONE —					
Osteitis	—	2	—	2	—
157. DISEASES OF JOINTS —					
Synovitis	—	4	—	4	—
158. Other Diseases of Bones	—	1	—	1	—
XIII. AFFECTIONS OF OLD AGE.					
164. Senility	—	7	3	7	—
XIV. AFFECTIONS PRODUCED BY EXTERNAL CAUSES.					
178. Burns by Fire ..	—	2	1	2	1
179. Burns — other than by Fire	—	1	—	1	—
182. Drowning	—	1	—	1	—
183. Wounds by Firearms (war excepted) ..	—	2	—	2	—
184 – 188. Wounds Unclassified.. ..	1	41	—	42	2
189. Wounds inflicted by Animals. Bites, Kicks, &c.	—	3	—	3	—
201. A. Dislocations ..	—	1	—	1	—
B. Sprains	—	1	—	1	—
C. Fractures	3	26	2	29	—
202. Other External Injuries	—	10	—	10	1
XV. ILL-DEFINED DISEASES.					
A. Debility	1	9	—	10	—
XVI. DISEASES THE TOTAL OF WHICH HAVE NOT EXCEEDED TEN DEATHS	1	4	2	4	—
TOTAL	35	772	88	807	29

Return of Diseases and Deaths (In-Patients), District Hospitals, 1927.

Diseases	Corozal Hospital		El Cayo Hospital		Orange Walk Hospital		Stann Creek Hospital		Toledo Hospital	
	Total cases treated	Deaths	Total cases treated	Deaths	Total cases treated	Deaths	Total cases treated	Deaths	Total cases treated	Deaths
INFECTIVE DISEASES —										
Dysentery	20	2	18	3	8	3	25	1	5	—
Gonorrhoea	4	—	10	—	1	—	26	—	—	—
Soft Chancre	—	—	—	—	1	—	—	—	—	—
Influenza	—	—	—	—	—	—	1	—	—	—
Malaria	35	3	23	—	35	3	74	1	24	—
Pneumonia	—	—	6	2	—	—	16	5	1	—
Enteritis	—	—	—	—	—	—	1	1	—	—
Rheumatism	9	—	—	—	1	—	5	—	4	—
Syphilis	9	—	5	—	—	—	4	—	6	—
Tetanus	—	—	2	2	—	—	—	—	—	—
Tuberculosis	5	—	5	1	—	—	7	2	10	2
Leishmaniasis	—	—	—	—	—	—	4	—	2	—
Whooping Cough	—	—	—	—	1	—	2	—	—	—
Enteric Fever	1	—	—	—	—	—	—	—	—	—
GENERAL DISEASES —										
Anaemia	—	—	—	—	1	—	—	—	—	—
Anaemia, pernicious	—	—	—	—	—	—	—	—	2	1
Debility	5	—	—	—	—	—	—	—	—	—
Diabetes	—	—	—	—	—	—	6	—	—	—
Senility	3	—	—	—	—	—	—	—	—	—
Malnutrition	—	—	—	—	—	—	2	—	—	—
DISEASES OF THE NERVOUS SYSTEM	5	1	5	—	—	—	14	—	—	—
DISEASES DUE TO DISORDERS OF NUTRITION	1	—	—	—	—	—	—	—	—	—
DISEASES OF THE EYE	1	—	—	—	1	—	3	—	—	—
DISEASES OF THE EAR	1	—	1	—	—	—	2	—	1	—
DISEASES OF THE NOSE	—	—	1	—	—	—	1	—	—	—
DISEASES OF THE TEETH	—	—	—	—	—	—	1	—	—	—
DISEASES OF THE CIRCULATORY SYSTEM	—	—	6	1	3	—	12	1	3	1
DISEASES OF THE RESPIRATORY SYSTEM	2	1	—	—	10	3	5	—	6	1
DISEASES OF THE DIGESTIVE SYSTEM	22	2	14	1	13	1	13	—	3	—
DISEASES OF THE LYMPHATIC SYSTEM	—	—	1	—	—	—	10	—	—	—
DISEASES OF THE URINARY SYSTEM	4	—	2	—	7	—	11	1	2	—
DISEASES OF THE MALE GENERATIVE SYSTEM	5	—	4	1	—	—	3	—	—	—
DISEASES OF THE FEMALE GENERATIVE SYSTEM	1	—	8	—	—	—	32	2	4	—
DISEASES OF THE BREAST	1	—	—	—	—	—	—	—	—	—
DISEASES OF THE ORGANS OF LOCOMOTION	—	—	—	—	1	—	3	—	—	—
DISEASES OF THE PERITONEUM	—	—	—	—	—	—	3	1	—	—
DISEASES OF THE CONNECTIVE TISSUE	33	—	16	—	—	—	37	2	2	—

Return of Diseases and Deaths (In-Patients), District Hospitals, 1927—*continued*.

Diseases	Corozal Hospital		El Cayo Hospital		Orange Walk Hospital		Stann Creek Hospital		Toledo Hospital	
	Total cases treated	Deaths	Total cases treated	Deaths	Total cases treated	Deaths	Total cases treated	Deaths	Total cases treated	Deaths
DISEASES OF THE MEDIASTINUM ..	—	—	—	—	—	—	—	1	1	—
DISEASES OF THE SKIN	—	—	2	—	12	—	—	—	7	—
DISEASES OF THE RECTUM AND ANUS	1	—	—	—	—	—	—	—	—	—
INJURIES	28	1	20	1	15	1	30	—	6	—
POISONING	1	—	—	—	—	—	—	—	—	—
GROWTHS, MALIGNANT	—	—	—	—	—	—	—	—	1	—
MALFORMATIONS ..	—	—	1	—	—	—	—	—	—	—
PARASITES —										
Ankylostomiasis	—	—	4	—	—	—	61	1	6	—
Ascaris	—	—	—	—	—	—	8	—	—	—
Beef-worm	—	—	—	—	—	—	—	—	—	—
Myiasis	—	—	2	—	—	—	3	—	—	—
MALINGERING	—	—	3	—	—	—	1	—	—	—
TOTAL	197	10	159	12	110	11	427	19	95	5

